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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,153	08/13/2001	Jyh-Ming Jong	SUN-P5892-RJL	8905
28422	7590	07/26/2005	EXAMINER	
HOYT A. FLEMING III P.O. BOX 140678 BOISE, ID 83714			SINGH, DALZID E	
			ART UNIT	PAPER NUMBER
			2633	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,153

Applicant(s)

JONG ET AL.

Examiner

Dalzid Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03 January 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art disclose by applicant as shown in Fig. 2 in view of Fujii et al (US Patent No. 6,169,435).

Regarding claim 1, the prior art discloses an optical transmitter for transmitting a first output data signal and a second output data signal, the optical transmitter comprising:

- a) a phase-locked-loop (205), the phase-locked-loop operable to receive a reference clock signal (210);
- b) a clock-recovery circuit (220), the clock-recovery circuit coupled to the phase-locked-loop, the clock-recovery circuit operable to receive a first input data signal, the clock recovery circuit generating a recovered clock signal;
- c) a first latch-decision circuit (225), the first latch-decision circuit receiving the recovered clock signal;
- d) a first latch (230), the first latch coupled to the first latch-decision circuit (225), the first latch operable to receive the first input data signal (215);

e) a first electro-optical converter (235), the first electro-optical converter coupled to the first latch (230), the first electro-optical converter operable to transmit the first output data signal;

f) a second latch-decision circuit (255);

g) a second latch (260), the second latch coupled to the second latch-decision circuit (255), the second latch operable to receive the second input data signal (245);
and

h) a second electro-optical converter (265), the second electro-optical converter coupled to the second latch (260), the second electro-optical converter operable to transmit the second output data signal.

The prior art differs from the claimed invention in that the prior art does not specifically disclose that the second latch-decision circuit receiving the recovered clock signal. However, it is well known to provide clock recovery signal to plurality of latch circuits. Fujii et al is cited to show such well known concept. In Fig. 1, Fujii et al show recovered clock signal (CLK2) receives by latch circuits (13a – 13n). Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to provide a recovered clock signal to plurality of latch circuits. One of ordinary skill in the art would have been motivated to do such in order to reduce complexity of system circuitry and hence reduce cost.

Regarding claim 2, on page 2 lines 7-10, the prior art disclose that the phase-locked-loop receives a reference clock signal and generates a plurality of clock signals, wherein each clock signal has a frequency that is approximately equal to the frequency

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of the input data signal. The prior art differ from the claimed invention in that the prior art does not specifically disclose that the clock signals have a frequency approximately equal to the frequency of the reference clock signal. However, it is well known for phase-locked-loop to generate clock signals that have a frequency approximately equal to the frequency of the reference clock signal. Fujii et al teach such well concept. In col. 11, lines 41-45, Fujii et al disclose phase-locked-loop producing clock signal equal to multiple of frequency (higher or lower) of reference clock. Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to provide phase-locked-loop to generate clock signals that have a frequency approximately equal to the frequency of the reference clock signal as taught by Fujii et al. One of ordinary skill in the art would have been motivated to do such in order to synchronized data rate of the input signal.

Regarding claim 3, on page 2, lines 10-14, the prior art discloses that the plurality of clock signals has a phase that is not equal to the phase of the reference clock signal.

Regarding claim 4, on page 2, lines 16-19, the prior art discloses that the clock-recovery circuit is operable to extract timing information from the first input data signal.

Regarding claim 5, on page 2, lines 2-23 to page 3, lines 1-4, the prior art discloses that the first latch-decision circuit, based upon timing information received from the clock-recovery circuit, is operable to determine a time to latch the first input data signal.

Regarding claim 6, as shown in Fig. 2, the prior art shows the first latch-decision circuit (225) is operable to receive the first input data signal (215).

Regarding claim 7, as shown in Fig. 2, the prior art shows that the first latch-decision circuit (225) is operable to receive the first input data signal (215) and the second latch-decision circuit (255) is operable to receive the second input data signal (245).

Regarding claim 8, on page 2, lines 20-23 to page 3, lines 1-4, the prior art discloses that the first latch-decision circuit is operable to receive the first input data signal and, based upon information extracted from the first input data signal and timing information received from the clock-recovery circuit, is operable to determine a time to latch the first input signal.

Regarding claim 9, as shown in Fig. 2, the prior art shows that the first electro-optical converter (235) includes a laser (see page 3, lines 9-10).

Regarding claim 10, as shown in Fig. 2, the prior art shows that the first electro-optical converter (235) is operable to generate an optical signal that is compliant with an optical signal defined in the InfiniBand specification (see page 3, lines 9-11).

Response to Arguments

3. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS
July 14, 2005



JASON CHAN
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